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#### **United States Patent and Trademark Office**

Applicant:

Vero

Examiner:

Lindsey

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10/060,718

Art Unit:

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Unilayer Fabric with Reinforcing Parts

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**TECHNOLOGY CENTER R3700** 

### Response

Responsive to the Official Action mailed February 3, 2004.

The present invention relates to a weft knit fabric which is chain-stitched so as to form a unilayer of a first fiber and a unilayer chain stitched island of a high performance fiber. The fabric is prepared with a preselected single needle which is program controlled.

Knit fabrics are grouped into two categories, weft and warp. Warp knitting requires two sets of needles wherein the fabric is made by building loops on top of each other. Each set of needles has its yarn continuously fed and yarn forms vertical loops in one course and then moves diagonally to the next course to knit the next course.

According to the present invention, there is one set of needles cooperating with a single needle to form a weft knit wherein loops are not built on top of each other. That is, the fabric is a unilayer.

In the knitting art there are recognized to be four principal stitches.

- 1. Purl Stitch
- 2. Plain Stitch
- 3. Miss Stitch, and
- 4. Tuck or Rib Stitch

A chain stitch is a plain stitch. The chain stitch is found in weft knitting. The present invention provides the combination of weft and chain stitching whereby when two different yarns are utilized and a select needle is utilized a unilayer with islands is formed. Moreover, the fabric is seamless.

Warp knitting will form either a miss stitch or tuck or rib stitch. Miss stitch and tuck or rib stitch cannot form a unilayer.

Submitted herewith is a Declaration of Dr. David Hall, a professor at the Textile and Materials Engineering College at Auburn University. The Declaration sets forth the understanding in the art of the grouping of knitting and of the sub-groups of knit fabric. It is recognized that Andrews et al uses conventional machines which form a different fabric than that of the present invention, namely warp stitched.

Reconsideration is respectfully requested of the rejection of the claims under 35 USC 103(a) as being unpatentable over Andrews et al in view of Weil.

Andrews et al use a dissimilar fiber 100b than that of the base fabric. The formation of the knitted fabric is entirely different from that of the present invention by

grouping and sub-grouping. The difference results in a difference in feel and utility. In addition, there is a difference in costs even when the different yarns are similar in each process. This distinction is noted by the commercial success and recognition at trade shows of the present invention.

Andrews uses conventional machines to form a conventional warp knit which cannot be a unilayer or plain knit. The details in the reference of the run-on band 202 has a meaning to those skilled in the art that there is a warp knit with two sets of needles which does not stop until the end of a cycle. Andrews et al discloses additional fabric layers to the backside.

Weil adds nothing to the teachings of Andrews et al which would lead one in the art to the present invention. Weil relates to the use of a flat knit wherein different areas of density is found utilizing the same yarn. There would be no motivation to apply the flat knit of Weil to the teachings of Andrews et al. The element missing is the use of a single needle in combination with a set of needles. It is respectfully submitted that the Examiner is using prohibitive hindsight by applying applicant's teaching when the element is missing in the combination of references. Applicant submits that the single needle use provided a patentable distinction.

Reconsideration is respectfully requested of the rejection of claims 2, 4-6 and 10 under 35 USC 103(a) as being unpatentable over Andrews in view of Weil and in further view of Kuehnel.

Kuehnel teaches the use of conventional multi-needle knitting which results in a warp knit. Kuehnel does not disclose the use of a single programmed needle to form a

unilayer weft knit fabric. Kuehnel supports applicant's position that the use of a single programmed needle cooperating with a set of needles is unexpected. Consequently, Kuehnel in combination with Andrews et al and Weil would not lead to a weft knit containing seamless islands of different yarn from that of the base fabric in which there is a unilayer.

Patent No. 5,511,394, which was cited by the Examiner supports applicant's position that the present invention is not predictable from the combination of references. Texture and size of a knitted article cannot be determined until the article is actually knitted and finished. Variations in knitting conditions, particularly the machine can create a difference. Applicant's difference is using a select single needle. Consequently, the combination of Andrews et al, Weil and Kuehnel wherein each use a different knitting method would not lead one in the art to the present invention. Also, claims 2, 4-6 and 10 depend for their patentability on claim 1.

Reconsideration is respectfully requested of the rejection of claims 3 and 7-9 under 35 USC 103(a) as being unpatentable over Andrews et al in view of Weil and further in view of Sullivan.

As noted at column 4, line 55 – column 5, line 4, and elsewhere, Sullivan uses a rib knit to form the fabric tubes. This leads away from use of the yarn of Sullivan in a west knit and plain kit fabric. The combination with Andrews et al and Weil would not lead to the unilayer fabric of the invention.

Reconsideration is respectfully requested of the rejection of claims 3, and 7-9

under 35 USC 103(a) as being unpatentable over Andrews et al in view of Weil and

further in view of Inoue.

Inoue teaches rib stitching and forms a warp knit which teaches away from the

present invention. The Examiner must consider the entire teachings of Inoue and not just

isolated teaching from each of the reference to arrive at the present invention. As

previously stated, Patent No. 5,511,394 teaches the unpredictability of combining

references where different machines are utilized and different knitting techniques are

disclosed.

Applicant has previously analyzed the claims under the Graham test and

demonstrated the differences.

The Examiner is respectfully requested to consider the differences of the present

invention over the prior art in view of the definitions taught in the academic world as

analyzed by Dr. Hall and as recognized in textile literature taught in universities.

Reconsideration is respectfully requested in view of the foregoing.

Respectfully submitted,

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